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ABSTRACT

This material was developed to be used by instructors in the health related fields who have contact with nurses, doctors, ambulance crews, emergency medical technicians, and paramedics. The essay is a summary from various portions of an educational unit. The objective of the essay is to provide the reader with current up-to-date factual information involving Sudden Infant Death Syndrome (SIDS). The article is divided into the following four categories: (1) general facts concerning SIDS, (2) medical research involving SIDS, (3) professional involvement with SIDS, and (4) parental reaction to SIDS. A review of the literature was made and is presented in summary form. An extensive list of references is included. (Author/EB)

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SUDDEN INFANT DEATH SYNDROME (SIDS):

THE QUIET KILLER

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The objective of this essay is to provide the reader with current up-to-date factual information involving Sudden Infant Death Syndrome (SIDS). This article is divided into the following four categories: 1.) general facts concerning SIDS; 2.) medical research involving SIDS; 3.) professional involvement with SIDS: and 4.) parental reaction to SIDS.

GENERAL FACTS CONCERNING SUDDEN INFANT DEATH SYNDROME

The following factual information was common to a majority of the articles and provided an insight into the nature of SIDS: approximately 10,000 to 15,000 infants die each year in the United States from SIDS (6, 25, 34). The rate is about 2.32 deaths per 1,000 live births (6). A majority of SIDS cases occur between two and six months of age with a peak occurring at three months (50, 51). There is a male predominance of SIDS (21, 33, 37). The majority of SIDS cases occur twice as frequently in the non-white population (25, 50). Low socioeconomic status fosters a high incidence of SIDS (6, 35). The highest rate of SIDS occurs among the American Indian infants, while the lowest rate occurs among Oriental infants (17). A high frequency of SIDS cases occur during the winter (21). SIDS cannot be predicted or prevented (4). Death occurs while sleeping (15, 42). There is no suffering associated with death (5, 9). SIDS is not hereditary, nor is it contagious in the usual sense (5). The highest rate of SIDS is among infants with a low birth weight and a short gestation period (5, 14, 17). Infants who die from SIDS appear well-nourished, well-developed and in good health (36). SIDS is not a new disease; it is referred to in the Bible (39). The rate of SIDS significantly increases if the mother is under 20 years of age, and has had one,or more, prior live births (17, 18, 19).

MEDICAL RESEARCH INVOLVING SIDS

A review of the literature revealed 10 areas that epidemiological studies (1, 6, 16, 25, 26, 27, 30, 38, 40) have considered as causative factors involving SIDS. The 10 areas uncovered in the literature are as follows: 1.) number of SIDS cases per year; 2.) incidence and rate; 3.) age distribution at death; 4.) sex; 5.) race; 6.) social and economic status; 7.) birth weight and gestation period; 8.) season of death and geographical location; 9.) apparent health of infants before death; and 10.) age of mother and number of previous live births.

Kraus (24) indicated there is a need to assess the importance of these factors and their effect on SIDS. The main objective of research involving SIDS is to identify the "final common pathway" leading to death (16). Beckwith (44) stated SIDS must be due to interference with one of the three immediate mechanisms: cardiac, respiratory, or neurological.

Theories originally thought to be the cause of SIDS have been disproven. Parish (36) conducted experiments with cow's milk, and theorized the infants developed antibodies to the milk, thus causing the SIDS. Valdes-Dapena (44) disproved this theory by proving there were no antibodies present in cow's milk in the 208 SIDS cases she studied. Towbin (45) hypothesized that spinal injury, resulting from a complicated delivery, produced spinal shock, thus affecting respiration and other vital functions. Consequently, the infant died in a similar fashion to SIDS victims. Valdes-Dapena (52) stated spinal injury has been eliminated as a causative factor producing SIDS, due to the research of Steinschneider (42) on reflexes in newborns. Suffocation (13) was a theory applied to SIDS, having its origin in the biblical times when it was referred to as "over-laying" (39). Wooley (39) disproved mechanical suffocation from blankets and pillows by using his own children as test

subjects. He discovered no matter how small the infant, it could find an air space to breathe.

Theories exist that may eventually lead to an explanation of SIDS. Mulvery (34) described the allergic potential, experimentation, and reasoning behind the house dust mite as a factor involved in SIDS. Urquhart (48) indicated that infants who experience repeated or prolonged antigenic stimulation from a viral pathogen may develop antiglobulin antibodies which may have some part in the final anaphylactic reaction leading to the SIDS. James (13) stated that the changes in the conducting tissue of the infant's heart, along with the presence of a normally innocuous agent, within this unstable system may act as a "triggering agent" responsible for the SIDS. Steinschneider (42) revealed that the physiological aspects of sleep will prove to be the deciding factor involving SIDS.

Bergman, Beckwith and Ray's (2) book, Sudden Infant Death Syndrome, is to date the only text that has been published on this syndrome. This book contains sections on epidemiology, pathology, virology and physiology, which should be of interest to pediatricians, pathologists, epidemiologists and general practitioners, as well as basic scientists. Bergman (2) states that this book represents a major contribution to medical literature, because it brings together reports from the leading researchers throughout the world who are dealing with the phenomenon commonly known as "crib death".

The research presently being conducted may prove to uncover the factor (3) causing SIDS. Unfortunately, even though SIDS studies are published in medical journals and research periodicals, the physicians reading these magazines pay little, if any, attention to these studies. Most physicians know little, if anything, about SIDS (31, 43).

PROFESSIONAL INVOLVEMENT WITH SIDS

A physician has few opportunities to accomplish more in the way of preventive psychiatry than when faced with a case of SIDS (4). The single most important aspect of SIDS, for the practicing physician, is the care of the stricken family (52). Not only can the physician reduce the guilt reactions associated with SIDS, but by working in the community with public officials, the physician can prevent unethical approaches to the parents of SIDS victims (10). However, how can the physician provide counseling to the parents when he knows nothing about SIDS (5, 11, 31, 32).

Smith (49) indicated that nurses have the opportunity to develop a close relationship with families, therefore, it is particularly important for them to know about SIDS. Pomeroy (39) suggested that nurses can provide facts about SIDS and thus spare the parents months or years of needless guilt. The nurse has the opportunity to play the much needed role in preventive psychiatry. Pomeroy (5) added this is the nurse's role and not that of a research scientist. A nurse must possess, at least, basic information about SIDS and the characteristics of grief reactions to perform this counseling (7). However, nursing schools provide no training or instruction on SIDS: therefore, nurses are unable to provide any assistance whatsoever to the grieving parents(31), or to themselves should SIDS happen to them.

Bergman (8) believes that every family that has lost a child to SIDS should receive authorative information about this condition from a physician, nurse, or other health professional who is both knowledgeable about the disease and skilled in dealing with characteristic grief reactions. Refer to Table I which lists eleven basic points the parents should be informed on, following the death of

their infant from SIDS. Unfortunately, at the present time, there are very few individuals who are knowledgeable about SIDS and are sensitive to the feelings of the parents (22).

PARENTAL REACTION TO SIDS

Pomeroy (5) indicated that SIDS occurs when the parents are unprepared to deal with the death. Immediately after an SIDS, the grief is manisfested among the parents by intense guilt reactions (32, 41). However, these are not the only reactions observed. Pomeroy (39) revealed parents show difficulty in concentrating. McCarthy (31) described how some parents express a loss of meaning to life. Stitt (43) indicated unusual fears become apparent after an SIDS. Bergman (5) discussed how denial of the infant's death is common and the mother may continue to draw the baby's bath or prepare his food. McCarthy (31) noted that parents become afraid of responsibility. Lindemann (29) explained that anger and resentment are common occurrances by the parents after an SIDS. The parents berate doctors and nurses, projecting them as the cause of death (43). Mental illnesses (4) and attempted suicides (55) have occurred after an SIDS.

Husband and wife relationships have many times been affected by an SIDS (41). The tragedy may cause a permanent modification of attitudes, and affect future behavior in the parents' decision to have more children (23). Numerous articles (5, 20, 43) have explained how the remaining children in the family have been affected by an SIDS. Bergman (5) stated counseling with the parents can, in a majority of cases, prevent the crippling reactions that occur after an SIDS.

Vaughan (54) stated instruction about SIDS should be provided in all health professional schools. Health professionals should be prepared to deal with SIDS

should it occur during the course of their careers. Curran (11) stated no longer should families have to tolerate callous medical examiners' procedures, nor should they be subjected to cruel inquests. The problem of SIDS is large enough to warrant attention, and should be investigated by the medical community.

TABLE I

INFORMATION OFFERED TO PARENTS OF SIDS VICTIMS

1. SIDS cannot be predicted; there is no sound or cry of distress.

2. It is not preventable; death occurs during sleep.

3. The cause is unknown.

4. The cause is not suffocation, aspiration or regurgitation. A study by Wooley has shown that covering the faces of babies with blankets does not result in anoxemia.

5. A minor illness, such as a common cold, may often precede death.

6. There is no suffering; death probably occurs within seconds.

7. SIDS is not contagious in the usual sense. Although a viral infection may be involved, it is not a "killer virus" that threatens other family members or neighbors. SIDS rarely occurs after six months of age.

8. SIDS is not hereditary; there is no greater chance for it to occur in one family than in another.

9. The baby is not the victim of a "freakish disease". About 10,000 to 15,000 babies die of SIDS every year in the United States.

10. SIDS is at least as old as the Old Testament and seems to have been as frequent in the 18th and 19th centuries as it is now. This demonstrates that new environmental agents, such as birth control pills, fluoride in the water supply and smoking do not cause SIDS. Despite increased attention in the literature in recent years, the incidence of SIDS is not rising.

11. SIDS occurs in the best of families. We have seen it happen in the hospital in infants admitted for minor surgery. (This point is especially comforting to young mothers who may feel inadequate in caring for their infants.)

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